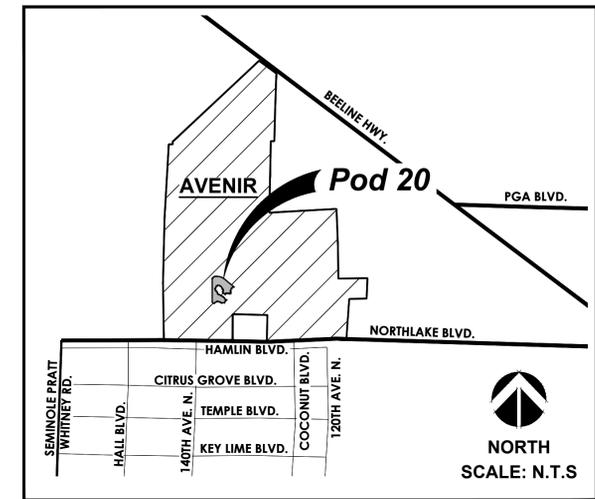


Avenir - Pod 20 Landscape Plans

Petition #: SPLN-21-11-000055
Palm Beach Gardens, Florida

LOCATION MAP



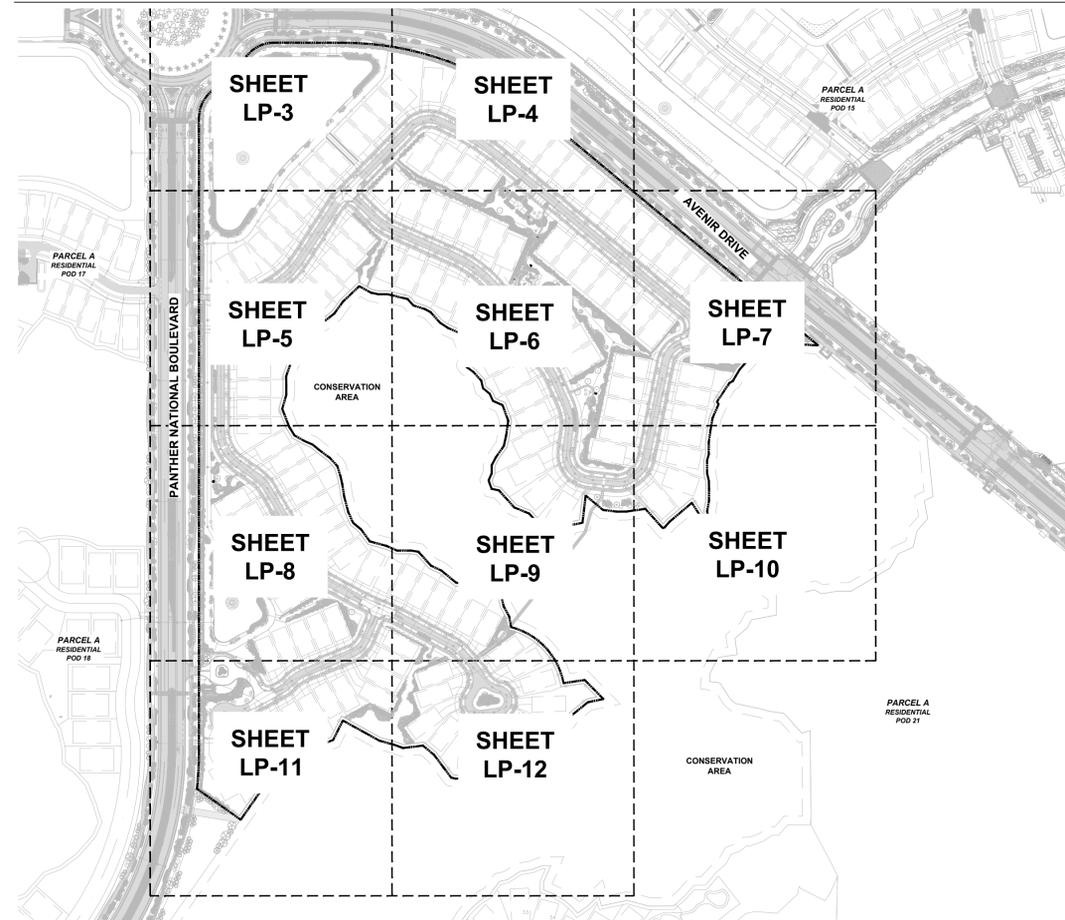
Urban design studio

Urban Planning & Design
Landscape Architecture
Communication Graphics

610 Clematis Street, Suite CU02
West Palm Beach, FL 33401
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#LCC000035

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OVERALL PLAN AND SHEET LAYOUT



SHEET LP-C: Cover Sheet
SHEET LP-2: Plant Schedule
SHEETS LP-3 to LP-12: Landscape Plans
SHEETS LP-13: Landscape Cross Section
SHEETS LP-14 to LP-15: Landscape Details
SHEET LP-16: Landscape Specifications



PLANTING NOTES

- BASE INFORMATION FOR SITE PLAN FROM A SURVEY PROVIDED BY CAULFIELD & WHEELER, INC., DATED 01/13/21.
- ALL INVASIVE SPECIES WILL BE ERADICATED FROM SITE AS REQUIRED BY CODE.
- ALL LANDSCAPE MATERIAL SHALL CONFORM TO THE MOST RECENT STANDARDS AS OUTLINED BY THE "GRADES AND STANDARDS FOR NURSERY PLANTS" PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES.
- SIGHT TRIANGLES SHALL BE PROVIDED AND MAINTAINED BY OWNER CLEAR OF VEGETATION TO PROVIDE UNOBSTRUCTED VISIBILITY BETWEEN 30 INCHES AND 8 FEET ABOVE GRADE.
- ALL INSTALLATION WORK SHALL BE CARRIED OUT IN A PROFESSIONAL MANNER IN ACCORDANCE WITH STANDARD NURSERY AND INSTALLATION PRACTICES.
- QUANTITIES ON PLANT LIST ARE FOR CONVENIENCE ONLY. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ALL PLANTS SHOWN ON LANDSCAPE PLANS.
- SURROUNDING INFORMATION AND PLANS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
- LIGHT POLES AND TREES WILL BE FIELD LOCATED TO AVOID CONFLICTS.
- ALL LANDSCAPE AREAS SHALL BE SODDED, MULCHED OR OTHERWISE COVERED WITH GROUND COVER PER THESE PLANS AS LABELED.
- ALL TREES SHALL BE LOCATED A MINIMUM OF 2'-0" FROM FACE OF TRUNK TO EDGE OF PAVEMENT OF ALL SIDEWALKS, PATHWAYS, AND/OR OTHER PAVED SURFACES, UNLESS OTHERWISE NOTED ON THE PLANS.
- OFFSETS OF PLANTING BEDLINES ARE SHOWN FOR LEGIBILITY PURPOSES ONLY. MULCH SHALL BE INSTALLED TO THE EDGE OF ANY SURFACE WHERE A PLANTING AREA OCCURS NEXT TO A SIDEWALK, PATHWAY, CURB, WALL, FENCE, UTILITY BOX/EQUIPMENT, OR OTHER NON-PLANTED AREA. NO SOD AREA LESS THAN 12" IN WIDTH SHALL BE ALLOWED.

LANDSCAPE EXCAVATION AND BACKFILL NOTES

- TREE AND SHRUB PLANTING BEDS WHICH FALL WITHIN OR NEAR ROADWAY AREAS SHALL BE COMPLETELY EXCAVATED AND BACK-FILLED WITH TOPSOIL. ALL SHELL-ROCK OR OTHER BASE MATERIALS, AND ALL SUBSOIL AND DEBRIS, SHALL BE COMPLETELY REMOVED FROM BENEATH SUCH PLANTING AREAS, TO A MINIMUM DEPTH OF 36". UPON COMPLETION OF EXCAVATION, LANDSCAPE ARCHITECT OR OWNER SHALL INSPECT THE EXCAVATED AREA PRIOR TO BACKFILLING WITH QUALITY FILL AND TOPSOIL.
- ALL TREE AND/OR SHRUB PLANTING AREAS WITHIN 8' OF BUILDING FOUNDATIONS, AND ANY OTHER PLANTING AREAS WHERE SIGNIFICANT BURIED CONSTRUCTION DEBRIS IS ENCOUNTERED, SHALL BE COMPLETELY EXCAVATED TO A MINIMUM DEPTH OF 36". UPON COMPLETION OF EXCAVATION, LANDSCAPE ARCHITECT OR OWNER SHALL INSPECT THE EXCAVATED AREA PRIOR TO BACKFILLING WITH TOPSOIL.

LEGEND

O.S.	OPEN SPACE TRACT		FIRE HYDRANT
L.M.T.	LAKE MAINTENANCE TRACT		DOG WASTE STATION
D.A.T.	DRAINAGE AND ACCESS TRACT		TRASH RECEPTACLE
A.T.	ACCESS TRACT		INTERPRETIVE / INFORMATIONAL SIGN
E.O.W.	EDGE OF WATER		BIKE RACK
U.E.	UTILITY EASEMENT		BENCH
S.U.A.	SEACOAST UTILITY AUTHORITY		STREET LIGHT
S.U.A.E.	S.U.A. EASEMENT		PEDESTRIAN LIGHT
R.O.W.	RIGHT OF WAY		

SITE DATA

PETITION NUMBER: TBD
PROJECT NAME: AVENIR POD 20
PROPERTY CONTROL NUMBERS: 52-41-42-14-00-000-3020
52-41-42-15-00-000-1000
SECTION / TOWNSHIP / RANGE: 14/42/41 & 15/42/41
GROSS ACREAGE: 51.157 ACRES
LAND USE DESIGNATION: MIXED USE (MXD)
ZONING: MXD PCD
LAND USE OVERLAY: WESTERN NORTHLAKE BLVD. CORRIDOR PLANNING AREA
RESIDENTIAL HOUSING TYPE: SINGLE FAMILY
RESIDENTIAL HOUSING CLASSIFICATION: DETACHED
TOTAL DWELLING UNITS: 144 D.U.
LOT SIZE: NUMBER OF UNITS:
65' x 130' 69 D.U.
55' x 130' 75 D.U.
NET DENSITY (144 D.U. / 51.157 AC.): 2.82 D.U./AC.
BUILDING HEIGHT: MAX. 3 STORIES / MAX. 36'

OPEN SPACE REQUIRED ACREAGE %
(35% OF 51.157 AC) 17.91 AC. MIN. 35%

OPEN SPACE PROVIDED ACREAGE %
LANDSCAPE / SOD AREAS / L.M.T.* 7.09 AC. / 308,999.1954 S.F. 13.87%
PRIVATE OPEN SPACE 8.85 AC. / 385,598.0896 S.F. 17.30%
WATER BODIES SURFACE AREA 3.67 AC. / 159,675.8058 S.F. 7.17%
RECREATION FACILITIES (PARKS) @ 50% 0.90 AC. / 38,908.3351 S.F. 1.75%
20.51 AC / 893,161.4299 S.F. 40.09%

L.M.T. is planted with sod and does not include a sidewalk; the corresponding acreage is included in the landscape/sod areas.

WATER BODIES: 3.67 AC.
RECREATION FACILITIES (PARKS): 1.79 AC.
BUILDING COVERAGE (55% OF SF LOT AREA): 16.23 AC.
RIGHT OF WAYS: 9.10 AC.
DRIVEWAYS/SIDEWALK (15% OF SF LOT AREA): 4.43 AC.
LANDSCAPE AREA (DOES NOT INC. LANDSCAPE IN R/W): 7.09 AC.
PRIVATE OPEN SPACE (30% OF SF LOT AREA): 8.85 AC.
TOTAL AREA: 51.16 AC.

REQUIRED RECREATION AREA:
1/4 AC. PARK WITHIN 1/4 MILE OF EACH PARCEL

PROVIDED RECREATION AREA: 1.79 AC.

GUEST PARKING PROVIDED: 28 SPACES
(ON-STREET SPACES)

LANDSCAPE POINTS

REQUIRED
-10 POINTS PER 100 SF OF LANDSCAPE / SOD AREAS AND PARKS
LANDSCAPE / SOD AREAS (314,811.88 SF) + REC. PARK (37,899.53 SF) - LMT (48,736.51 SF) = 303,974.9 SF
303,974.9 SF / 100 x 10 = 30,397 POINTS REQUIRED

PROVIDED
-TREES 13,179.0 POINTS
-PALMS 5,999.4 POINTS
-SHRUBS & GRASSES 18,496.5 POINTS
-SOD 5,000.0 POINTS
TOTAL 42,674.9 POINTS

LITTORAL PLANTING REQUIREMENTS

LAKE	PERIMETER OF SHORELINE	PLANTING AREA		TREES	
		REQUIRED *	PROVIDED	REQUIRED **	PROVIDED
LAKE #1	1,664.49 LF	8,322 SF	8,944 SF	104	104
LAKE #2	747.21 LF	3,736 SF	3,959 SF	49	49

*LITTORAL PLANTING AREA REQUIRED = 10 SF PER 1 LF OF SHORELINE, FOR A MIN. OF 50% OF SHORELINE
**LITTORAL TREES REQUIRED = 1 TREE PER 80 SF OF LITTORAL PLANTING AREA

DEVELOPMENT TEAM

CIVIL ENGINEER: BALLBE & ASSOCIATES
2737 NORTHEAST 30TH PLACE
FORT LAUDERDALE, FL 33306
(954) 491-7811

SURVEYOR: ASSOCIATED LAND SURVEYORS, INC.
4152 W. BLUE HERON BOULEVARD
RIVIERA BEACH, FL 33404
(561) 848-2102

SITE PLANNER & LANDSCAPE ARCHITECT: URBAN DESIGN STUDIO
610 CLEMATIS STREET, SUITE CU02
WEST PALM BEACH, FL 33401
(561) 366-1100

TRAFFIC ENGINEER: SUSAN E. O'ROURKE, PE, INC.
428 S.W. AKRON AVENUE, SUITE 1A
STUART, FL 34994
(772) 781-7918

Avenir - Pod 20 A Planned Community Development Palm Beach Gardens, Florida Cover Sheet

Date: October 2021
Project No.: 12-065.044
Designed By: WVO
Drawn By: WVO
Checked By: WT

Revision Dates:

PBG Submittal: 11.04.2021
PBG Resubmittal: 07.29.2022
PBG Resubmittal: 09.02.2022
PBG Resubmittal: 09.22.2022

LP-C of 16

OVERALL PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	PREFERRED PLANT	FL FRIENDLY PLANT	PTS. PER PLANT	TOTAL POINTS
	BS	21	Bursera simaruba / Gumbo Limbo Container grown, 12' Ht. x 5' Spr., 2.5' Cal., Straight Trunk, Full Canopy	Y	Y	15	315.0
	CF	22	Casia fastuosa / Golden Shower Tree B&B, 12' Ht. x 5' Spr., 2.5' Cal., Single Straight Trunk, Full Canopy	Y	Y	15	330.0
	CA2	21	Cassia rostrata / Autograph Tree B&B, 12' Ht. x 5' Spr., 2.5' Cal., Single Straight Trunk, Full Canopy	Y	N	15	315.0
	CD	14	Coccoloba diversifolia / Pigeon Plum Container Grown, 10' Ht. x 4' Spr., Full Canopy	Y	Y	5	70.0
	CE	63	Conocarpus erectus / Green Button Wood B&B, 12' Ht. x 5' Spr., 2.5' Cal., Single Straight Trunk, Full Canopy	Y	Y	15	945.0
	CE2	107	Conocarpus erectus sericeus / Silver Button Wood B & B, 12' Ht. x 5' Spr., 2.5' Cal., Straight Trunk, Full Canopy	Y	Y	15	1605.0
	CES	77	Conocarpus erectus sericeus / Silver Button Wood / Multi Trunk B & B, 12' Ht. x 5' Spr., 2.5' Cal., Straight Trunk, Full Canopy	Y	Y	15	1155.0
	CS	23	Cordia sebestena / Orange Geiger Tree Container Grown, 12' Ht. x 6' Spr., 2' Cal., Single Trunk, Full Canopy	Y	Y	15	345.0
	DR	2	Delonix regia / Royal Poinciana Container grown, 12' Ht. x 5' Spr., 2.5' Cal., Single trunk, Full Canopy	N	Y	15	30.0
	ER	1	Eucalyptus deglupta / Rainbow Eucalyptus 16' Ht. x 8' Spr., 4' Cal., Single Straight Trunk, Full and Even Canopy, No Low Crotch	N	N	15	15.0
	IE2	198	Ilex x attenuata 'Eagleston' / Eagleston Holly Container Grown, 12' Ht. x 5' Spr., 2.5' Cal., Straight Trunk, Full Canopy	Y	Y	15	2970.0
	LM	6	Lagerstroemia x Muskogee / Lavender Crape Myrtle Multi-Trunk Container Grown, 12' Ht. x 5' Min. Spr., Min. 5' Clear Trunk, 2.5' Cal., Multi-Trunk, Wide Canopy, Lavender Blooms	N	Y	15	120.0
	LJ	17	Ligustrum japonicum / Japanese Privet Container Grown, 6' Ht. x 5' Spr., Full and Dense Crown	Y	Y	5	85.0
	MG	29	Magnolia grandiflora 'D.D. Blanchard' TM / Southern Magnolia Container Grown, 12' Ht. x 5' Spr., 3' CT, Straight Trunks, Full Dense Canopy	Y	Y	15	435.0
	NO	1	Nerium oleander 'Calypso' / Calypso Oleander Container Grown, 8' Ht. x 3' Spr., 1.5' Cal., Full and Dense Canopy	N	Y	8	8.0
	QV	98	Quercus virginiana / Southern Live Oak Container Grown, 12' Ht. x 5' Spr., 2.5' Cal., Straight Trunk, Full Canopy	Y	Y	15	1470.0
	SM	3	Swietenia mahagoni / West Indian Mahogany Container grown, 12' Ht. x 5' Spr., 2.5' Cal., Straight trunk, Full Canopy	Y	Y	15	45.0
	TH	58	Tabebuia heterophylla / Pink Tabebuia Container Grown, 12' Ht. x 6' Spr., 2.5' Cal., Single Straight Trunk, Full Canopy	Y	Y	15	870.0
	TG	7	Tibouchina granulosa / Purple Glory Tree B&B, 12' Ht. x 5' Spr., 2.5' Cal., Single Straight Trunk, Full Canopy	Y	Y	15	105.0
TREE SUBTOTAL							11233.0
PALM TREES	CODE	QTY	BOTANICAL / COMMON NAME				
	AM2	5	Adonia Merrillii / Christmas Palm Field Grown, 10-14' OA Ht., Single Trunk, Full Head, No Scarred Trunk	Y	Y	5.3	26.5
	CN	252	Cocos nucifera / Green Malaysian / Coconut Palm Field Grown, Varying Heights, 8-12' GW, Full Head, No Scarred Trunk	Y	N	5.3	1335.6
	DD	11	Dypsis decaryi / Triangle Palm Field Grown, 18' Ht. x 10' Spr., Full and Dense	Y	N	15.3	168.3
	PD	15	Phoenix dactylopera / Medjool / Date Palm Field Grown, 20' CT, Florida Fancy, Classic cut, Matched Hts., Full Crown *SEE NOTE BELOW SCHEDULE*	Y	Y	15.3	229.5
	PH3	8	Phoenix roebelenii / Pigmy Date Palm Triple Trunk 5' O.A. Ht., Triple Trunk, 2' Cl. Each Trunk, Full Head *SEE NOTE BELOW SCHEDULE*	Y	N	5.3	42.4
	PS10	5	Phoenix sylvestris / Wild Date Palm Field Grown, 10' CT *SEE NOTE BELOW SCHEDULE*	Y	N	12.3	61.5
	PE10	7	Pythosperma elegans / Alexander Palm Field Grown, Triple, Minimum 10' CW	Y	Y	12.3	86.1
	PE1	8	Pythosperma elegans / Alexander Palm Field Grown, Single, Varying Heights, Minimum 12' CW, Full Crown	Y	Y	12.3	98.4
	SP	452	Sabal palmetto / Cabbage Palmetto Field Grown, Varying Heights, 9-18' CT, Slick Straight Trunk, Hurricane Cut *SEE NOTE BELOW SCHEDULE*	Y	Y	8.8	3977.6
PALM SUBTOTAL							5999.4
LITTORAL TREES	CODE	QTY	BOTANICAL / COMMON NAME				
	AR-L	29	Acer rubrum / Red Maple Container Grown, 14' OA Ht. Min. x 5'-6' Spr. Min., Straight Trunk, Full Canopy	Y	Y	17	493.0
	AR-M	28	Acer rubrum / Red Maple Container Grown, 12' OA Ht. Min. x 4'-5' Spr. Min., Straight Trunk, Full Canopy	Y	Y	15	420.0
	AR-S	29	Acer rubrum / Red Maple Container Grown, 10' OA Ht. Min. x 3'-4' Spr. Min., Straight Trunk, Full Canopy	Y	Y	5	145.0
	TD-L	24	Taxodium distichum / Bald Cypress Container Grown, 14' OA Ht. Min. x 5'-6' Spr. Min., Straight Trunk, Even Canopy, Full	Y	Y	17	408.0
	TD-M	24	Taxodium distichum / Bald Cypress Container Grown, 12' OA Ht. Min. x 4'-5' Spr. Min., Straight Trunk, Even Canopy, Full	Y	Y	15	360.0
	TD-S	24	Taxodium distichum / Bald Cypress Container Grown, 10' OA Ht. Min. x 3'-4' Spr. Min., Straight Trunk, Even Canopy, Full	Y	Y	5	120.0
LITTORAL SUB.							1946.0
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME				
	AA	3	Agave attenuata / Foxtail Agave 15 Gal. Full to Base and Dense	N	N	1	3.0
	AP	2	Alocasia 'Portadora' / Elephant Ear 15 Gal. Full to Base and Dense	N	N	1	2.0
	CC	14	Chamaedorea cataractarum / Cat Palm 7 Gal., 36" Ht. x 24" Spr., Full to Base and Dense	Y	N	1	14.0
	CHR	3164	Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum 3 Gal., 18" Ht. x 12" Spr., 36" O.C., Full to base and dense	Y	Y	1	3164.0
	CLU3	515	Clusia guttifera / Small-Leaf Clusia 3 Gal., 24" Ht. x 24" Spr., 36" O.C., Full and Dense	Y	N	1	515.0
	CLU	47	Clusia guttifera / Small-Leaf Clusia 3 Gal., 18" Ht. x 18" Spr., 30" O.C., Full and Dense	Y	N	1	47.0
	CM	3	Colocasia 'Mau Gold' / Mau Gold 7 Gal. Full to Base and Dense	N	N	1	3.0
	CB2	6	Cordylone fruticosa 'Bolero Tricolor' / Bolero Tricolor 7 Gal., 36" Ht. x 24" Spr., 3-3 PPP, Full and Dense	Y	N	1	6.0
	CR13	10	Crinum augustum 'Queen Emma' / Queen Emma Crinum 7 Gal., 1 PPP, 3 Ht. x 3' Spr., Disease Free, Specimen	Y	Y	1	10.0

SHRUB AREAS	CODE	QTY	BOTANICAL / COMMON NAME				
	AZ	610	Alpinia zerumbet / Shell Ginger 3 Gal., 24" Ht. x 24" Spr., 36" O.C., Full and Dense, Full to Base	Y	Y	1	610.0
	AV	46	Alpinia zerumbet 'Variegata' / Variegated Shell Ginger 3 Gal., 24" Ht. x 18" Spr., 30" O.C., Full and Dense, Full to Base	Y	Y	1	46.0
	AD	46	Asparagus densiflorus 'Myers' / Myers Asparagus Fern 3 Gal., 18" Ht. x 18" Spr., 24" O.C., Full and Dense, Full to Base	N	N	1	46.0
	CA	143	Calliopsis americana / American Beautyberry 7 Gal., 24" Ht. x 30" Spr., 36" O.C., Full to Base, Dense	Y	Y	1	143.0
	CHR1	133	Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum 3 Gal., 18" Ht. x 12" Spr., 24" O.C., Full to Base and Dense	Y	Y	1	133.0
	CP	27	Codiaeum variegatum 'Petra' / Petra Croton 3 Gal., 18" Ht. x 12" Spr., 24" O.C., Full to Base and Dense	Y	Y	1	27.0
	DE	150	Duranta erecta 'Gold Mound' / Gold Mound Duranta 3 Gal., 18" Ht. x 12" Spr., 24" O.C., Full to Base and Dense	Y	Y	1	150.0
	EVO	798	Evolvulus glomeratus 'Blue Daze' / Blue Daze 3 Gal., 12" Ht. x 10" Spr., 24" O.C., Fully Rooted and Dense	N	N	1	798.0
	FG2	54	Farugium japonicum 'gigantea' / Giant Farugium 3 Gal., 18" Ht. x 12" Spr., 24" O.C.	N	N	1	54.0
	FIC	1171	Ficus microcarpa 'Green Island' / Green Island Ficus 3 Gal., 12" Ht. x 10" Spr., 24" O.C., Fully Rooted and Dense	N	N	1	1171.0
	IXO	284	Ixora 'Nova Grant' / Ixora 3 Gal., 18" Ht. x 18" Spr., 24" O.C., Full to Base, Dense, Red	Y	N	1	284.0
	JAS	56	Jasminum volubile / Wax Jasmine 3 Gal., 12" Ht. x 12" Spr., 30" O.C., Full and Dense, Full to Base	Y	N	1	56.0
	JP	466	Juniperus chinensis 'Parsonii' / Parson Juniper 3 Gal., 12" Ht. x 10" Spr., 24" O.C., Fully Rooted and Dense	Y	N	1	466.0
	MYR	98	Myrsine fragrans / Simpson's Stopper 1 Gal., 12" Ht. x 6" Spr., 36" O.C., Full and dense	Y	Y	1	98.0
	NEP	153	Nepenthes falcata / Macho Fern 3 Gal., 18" Ht. x 18" Spr. Min., 24" O.C., Full and Dense, Full to Base	Y	N	1	153.0
	OS	14	Odontonema strictum / Red Firespike 7 Gal., 30" Ht. x 24" Spr., 36" O.C.	N	N	1	14.0
	PHX	10	Philodendron 'Xanadu' / Xanadu Philodendron 7 Gal., 24" Ht. x 30" Spr., 36" O.C., Full to Base, Dense	Y	Y	1	10.0
	PLU	189	Plumbago auriculata 'Imperial Blue' / Plumbago 3 Gal., 24" Ht. x 24" Spr., 36" O.C., Full and Dense, Full to Base	Y	Y	1	189.0
	POD	485	Podocarpus microphyllus 'Pringles' / Dwarf Podocarpus 3 Gal., 15" Ht. x 12" Spr., 24" O.C., Fully Rooted, Full to Base, Dense	Y	N	1	485.0
	PN	178	Psychotria nervosa / Wild Coffee 3 Gal., 24" Ht. x 24" Spr., 36" O.C., Full and Dense, Full to Base	Y	N	1	178.0
	RUS	705	Russelia equisetiformis / Firecracker Plant Container Grown, 24" Ht. x 24" Spr., 24" O.C., Fully Rooted and Dense	Y	N	1	705.0
	SCH	2026	Schefflera arboricola 'Trinette' / Schefflera 3 Gal., 18" Ht. x 15" Spr., 24" O.C., Full to Base and Dense	Y	Y	1	2026.0
	SER	19	Serenoa repens / Saw Palmetto 1 Gal., 10" Ht. x 10" Spr., 36" O.C.	Y	Y	1	19.0
	SR	30	Strelitzia reginae / Bird Of Paradise 7 Gal., 36" Ht. x 18" Spr., 36" O.C.	N	N	1	30.0
	ZF	584	Zamia floridana / Coontie Palm 3 Gal., 18" Ht. x 18" Spr., 24" O.C., Full to Base and Dense	Y	Y	1	584.0
GRASSES	CODE	QTY	BOTANICAL / COMMON NAME				
	DIA	1918	Dianella tasmanica 'Variegata' / Flax Lily Container Grown, 12" Ht. x 12" Spr. Min., 18" O.C., Fully Rooted and Dense	Y	N	1	1918.0
	DIE	431	Dietes iridifolia / White African Iris 3 Gal., 18" Ht. x 15" Spr., 30" O.C., Fully Rooted and Dense	N	N	1	431.0
	LIR	968	Liriope muscari 'Emerald Goddess' / Liriope 1 Gal., 12" Ht. x 12" Spr., 18" O.C., Full to Edge of Pot	Y	Y	1	968.0
	MUH	709	Muhlenbergia capillaris / Pink Muhly Grass 1 Gal., 24" Ht. x 22" Spr., 36" O.C., Fully Rooted and Dense	N	Y	1	709.0
	SPA	12	Spartina bakeri / Sand Cord Grass 1 Gal., 24" Ht. x 22" Spr., 36" O.C., Fully Rooted and Dense	N	N	1	12.0
	FAK	1,519	Tripsacum dactyloides / Fakahatchee Grass 3 Gal., 24" Ht. x 22" Spr., 36" O.C., Fully Rooted and Dense	Y	Y	1	1.5
LITTORAL PLANTINGS	CODE	QTY	BOTANICAL / COMMON NAME				
	CAN	461	Canna flaccida / Yellow Canna Bare Root, Min. 12" Ht., 3-4 Stems Per Plant, 36" O.C., Full Erect Foliage	N	Y	1	461.0
	AME	216	Crinum americanum / Swamp Lily Bare Root, Min. 12" Ht., 3-4 Stems Per Plant, 36" O.C., Full Erect Foliage	Y	Y	1	216.0
	ELE	447	Eleocharis interstida / Jointed Spikerush Bare Root, Min. 12" Ht., 3-4 Stems Per Plant, 36" O.C., Full Erect Foliage	N	N	1	447.0
	PON	276	Pontederia cordata / Pickerel Weed Bare Root, Min. 12" Ht., 3-4 Stems Per Plant, 36" O.C., Full Erect Foliage	N	N	1	276.0
GROUND COVERS	CODE	QTY	BOTANICAL / COMMON NAME				
	GP	743	Gaillardia pulchella / Blanketflower 4" Pots, 12" O.C.	N	Y	.5	371.5
	IB2	46	Iris virginica / Blue Flag Iris 3 Gal., 3 PPP, 18" Ht. x 18" Spr., 24" O.C., Full to Base and Dense	Y	Y	.5	23.0
	TSP	161	Tradescantia pallida 'Purple Queen' / Purple Queen 1 Gal., 6" Ht. x 6" Spr., 12" O.C., Full to Edge of Pot	N	Y	.5	80.5
SHRUB SUBTOTAL							18496.5
SOD AND MULCH	CODE	QTY	BOTANICAL / COMMON NAME				
	MULCH	TBD	Shredded Mulch / Mulch Free of Foreign Materials and Weeds, Minimum Depth After Settling Shall be 3". Quantity to be Verified in the Field	N/A	N/A	N/A	N/A
	SOD	TBD	Stenotaphrum secundatum 'CitraBlue' / CitraBlue St. Augustine Disease Free, Laid Tightly w/ Staggered Joints, Rolled and Sanded to Level Lawn "Quantity to be Verified in the Field"	Y	Y	0.25 / 10 SF	5000
	ROOT BARRIER	TBD	Root Barrier 36" Depth Min., Installed per Manuf. Specs., Refer to Landscape Details for More Information, "Quantity to be Verified in the Field"	N/A	N/A	N/A	N/A
POD 20 POINT TOTAL							42674.9

* POINT TOTAL PER TREES OF VARYING HEIGHT CALCULATED BY MEAN HEIGHT OF TREE

NOTE: PLANT SIZES LISTED IN PLANT SCHEDULE ARE MINIMUMS. REFER TO "PLANTING SPECIFICATIONS" SHEET FOR MORE INFORMATION.

ALL PALM TREES WHOSE SPECIES ARE SUSCEPTIBLE TO LETHAL BRONZING DISEASE MUST HAVE NURSERY CERTIFICATION THAT THE TREES TO BE INSTALLED ARE FREE OF LETHAL BRONZING DISEASE. THESE SPECIES INCLUDE, BUT ARE NOT LIMITED TO, CABBAGE PALMS (SABAL PALMETTO) AND DATE PALMS (PHOENIX SPP.). REFER TO PUBLICATIONS BY UFPPAS FOR A COMPLETE LIST OF POTENTIAL HOST SPECIES. UPON DELIVERY TO THE SITE, THESE PALM TREES MUST BE TREATED WITH CURRENT BEST PRACTICE INJECTIONS FOR PREVENTATIVE MAINTENANCE.

- ALL PLANT MATERIAL SPECIFICATIONS AND CONTAINER SIZES LISTED IN THE PROJECT PLANT SCHEDULE ARE REQUIRED MINIMUMS. ALL PLANT MATERIAL SHALL BE FLORIDA # 1 OR BETTER. CONTRACTOR CAN EXCEED THE REQUIRED MINIMUM SPECIFICATION AND CONTAINER SIZE BASED ON MATERIAL AVAILABILITY.
- ALL PLANT MATERIAL SHALL MEET AND ADHERE TO LATEST EDITION OF FLORIDA GRADES AND STANDARDS FOR NURSERY PLANTS. THE LANDSCAPE ARCHITECT OR CLIENT HAVE THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING THESE STANDARDS.



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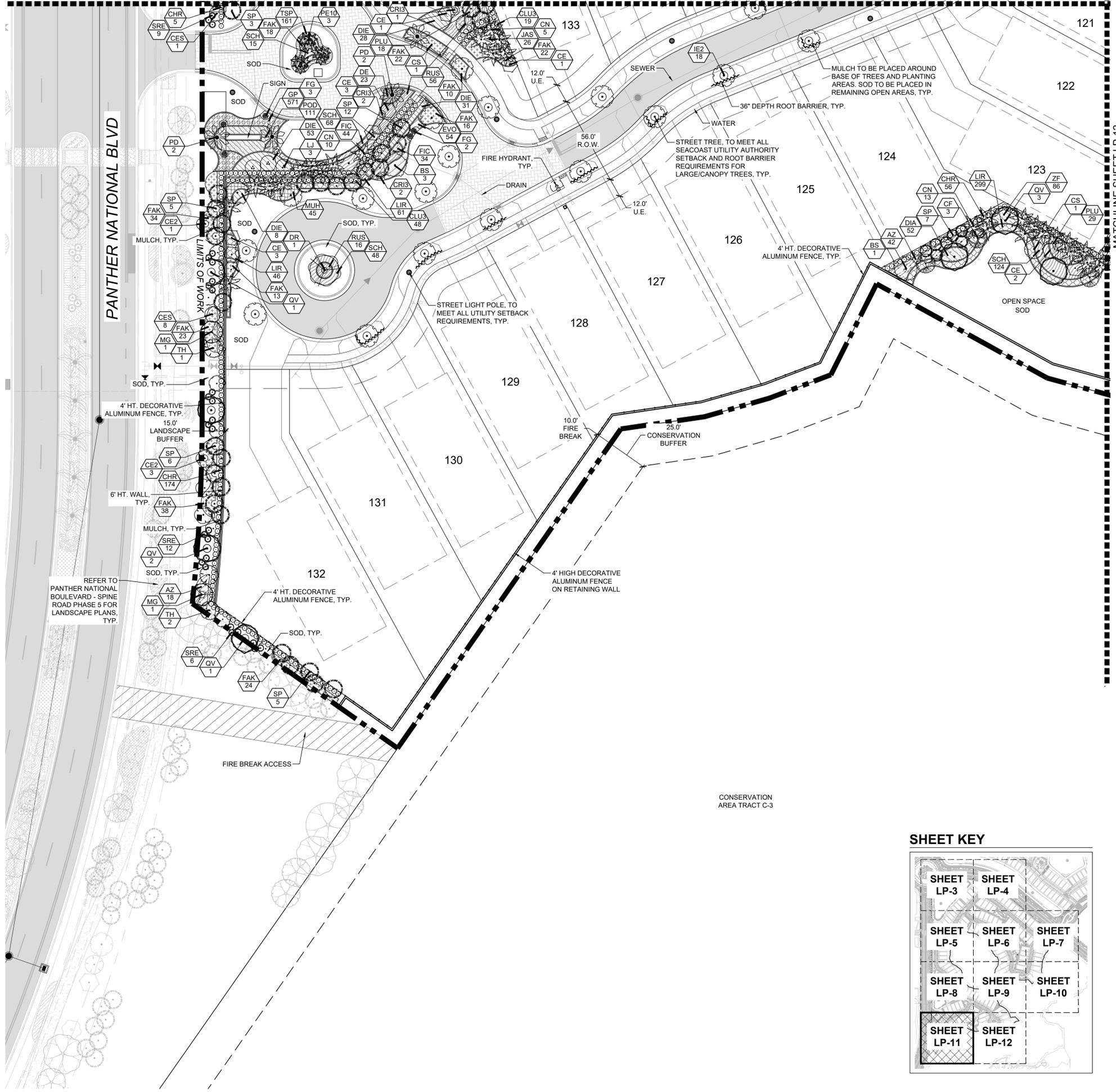
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**Avenir - Pod 20
A Planned Community Development
Palm Beach Gardens, Florida
Plant Schedule**

Date: October 2021
Project No.: 12-065.044
Designed By: WVO
Drawn By: WVO
Checked By: WT

Revision Dates:
PBG Submittal: 11.04.2021
PBG Resubmittal: 07.29.2022
PBG Resubmittal: 09.02.2022
PBG Resubmittal: 09.22.2022



PLANT LEGEND

CODE	BOTANICAL / COMMON NAME	CODE	BOTANICAL / COMMON NAME
01	Acacia saligna / Golden Wattle	02	Albizia julibrissin / Silk Tree
02	Casearia latifolia / Golden Shower Tree	03	Albizia julibrissin / Silk Tree
03	Casearia latifolia / Golden Shower Tree	04	Albizia julibrissin / Silk Tree
04	Casearia latifolia / Golden Shower Tree	05	Albizia julibrissin / Silk Tree
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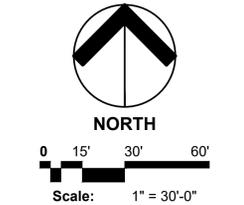


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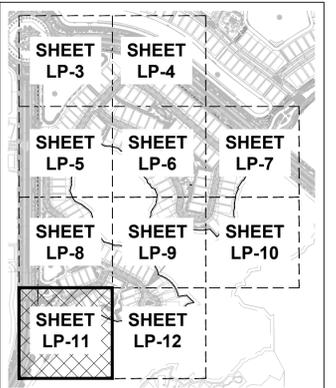
Avenir - Pod 20
A Planned Community Development
Palm Beach Gardens, Florida
Landscape Plan

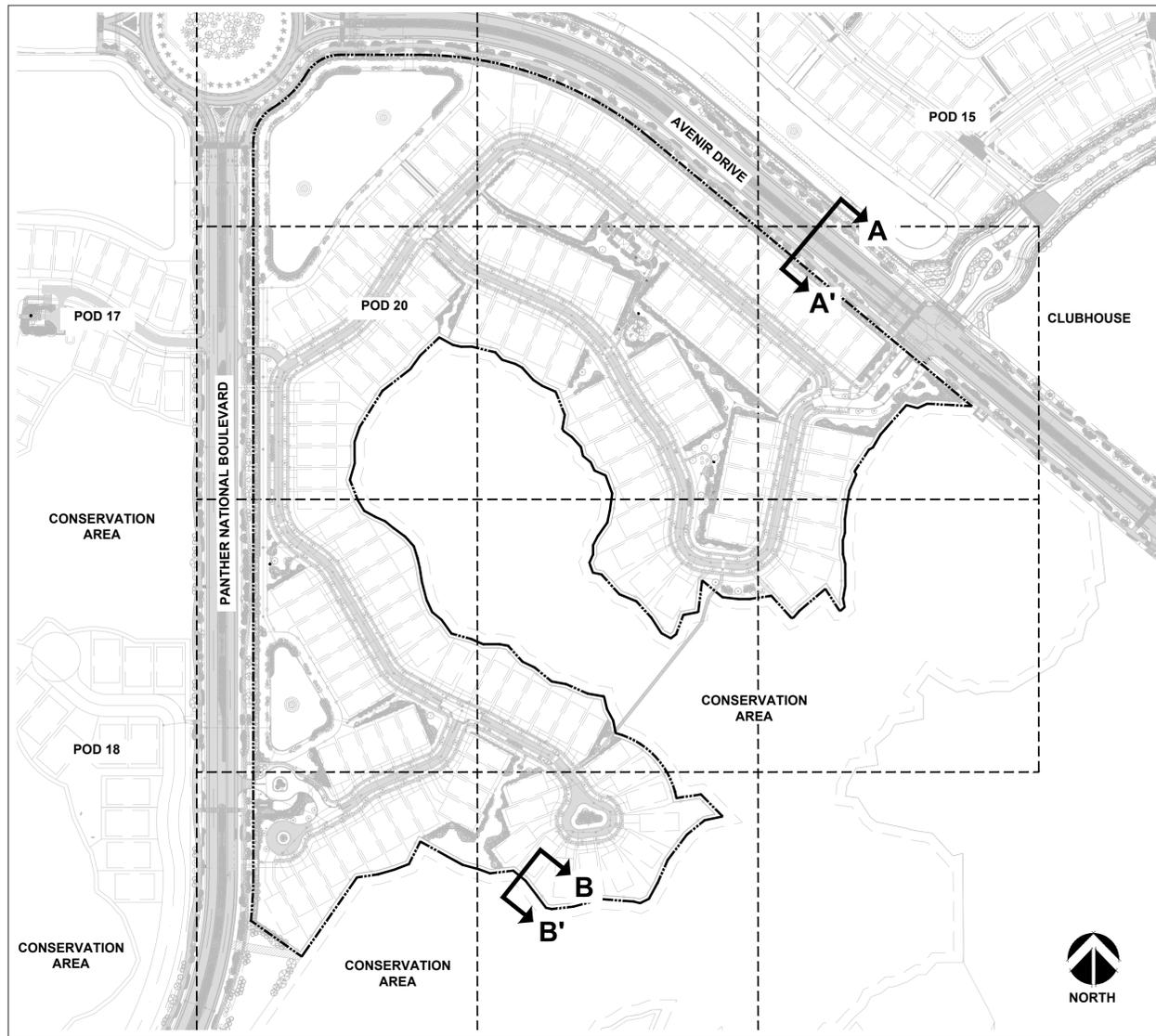


Date: October 2021
Project No.: 12-065.044
Designed By: WVO
Drawn By: WVO
Checked By: WT

Revision Dates:
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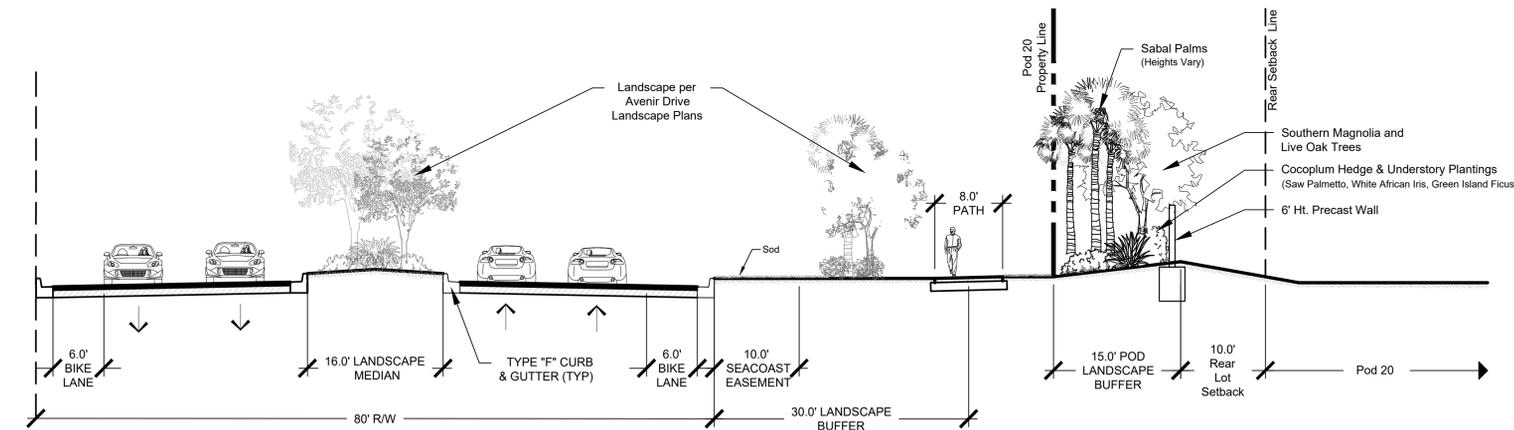
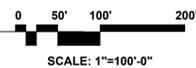
SHEET KEY





CROSS SECTION KEY MAP

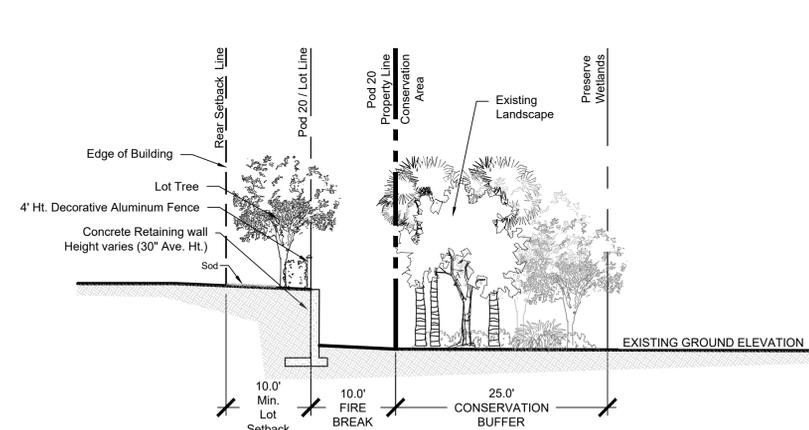
POD 20



NOTES:
 1. The elevations of the proposed homes shown in the section above are conceptual and provided for illustrative purposes only. Final architectural elevations for the homes in each pod will be submitted at a later date by the contracted home builder, for review and approval by the City of Palm Beach Gardens.
 2. Landscape materials are depicted to represent estimated heights for each species five (5) years after planting.

CROSS SECTION A-A': AVENIR DRIVE ADJACENT TO RESIDENTIAL POD

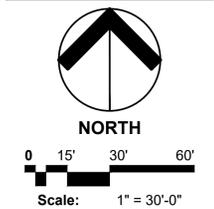
POD 20



NOTES:
 1. The elevations of the proposed homes shown in the section above are conceptual and provided for illustrative purposes only. Final architectural elevations for the homes in each pod will be submitted at a later date by the contracted home builder, for review and approval by the City of Palm Beach Gardens.
 2. Landscape materials are depicted to represent estimated heights for each species five (5) years after planting.

CROSS SECTION B-B': SOUTH BUFFER

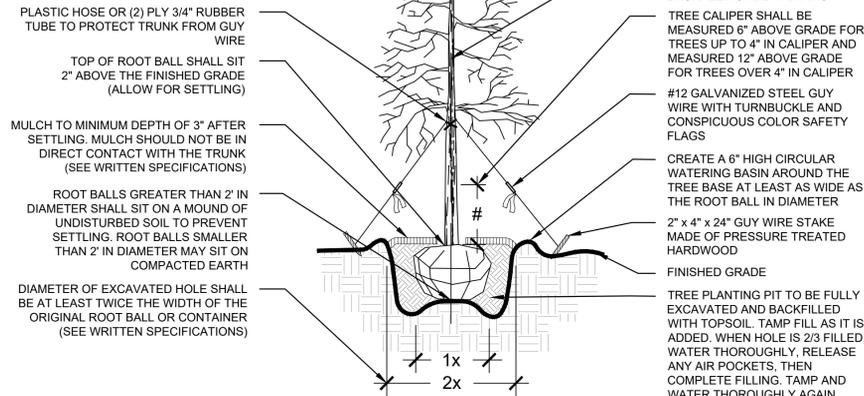
POD 20



Date: October 2021
 Project No.: 12-065.044
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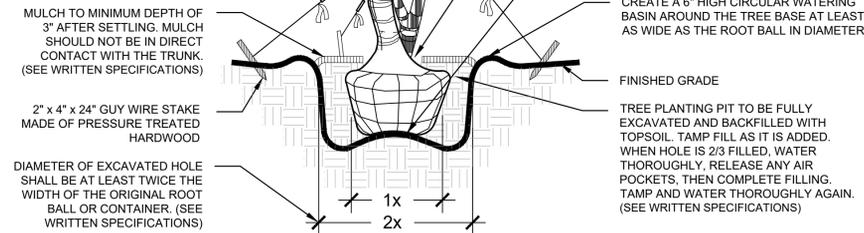
- NOTES:
1. ALL TREES SHALL MEET FLORIDA #1 OR BETTER STANDARDS.
 2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE TREE AND ROOT BALL.
 3. ANY PRUNING SHALL BE COMPLETED AT THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.
 4. NO NAILS SHALL BE DRIVEN INTO TREE AND TRUNK SHALL BE FREE OF ANY MAJOR SCARS.
 5. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.



TREE PLANTING DETAIL

NOT TO SCALE

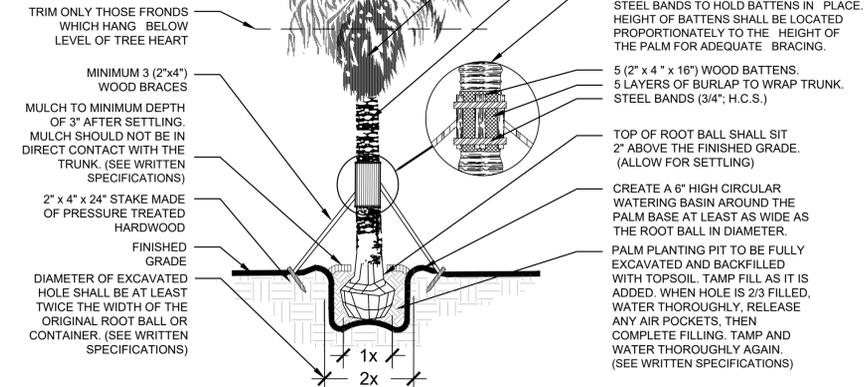
- NOTES:
1. ALL TREES SHALL MEET FLORIDA #1 OR BETTER STANDARDS
 2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE TREE AND ROOT BALL.
 3. ANY PRUNING SHALL BE COMPLETED AT THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.
 4. NO NAILS SHALL BE DRIVEN INTO TREE AND TRUNK SHALL BE FREE OF ANY MAJOR SCARS.
 5. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.



IRREGULAR & MULTI-STEM TREE PLANTING DETAIL

NOT TO SCALE

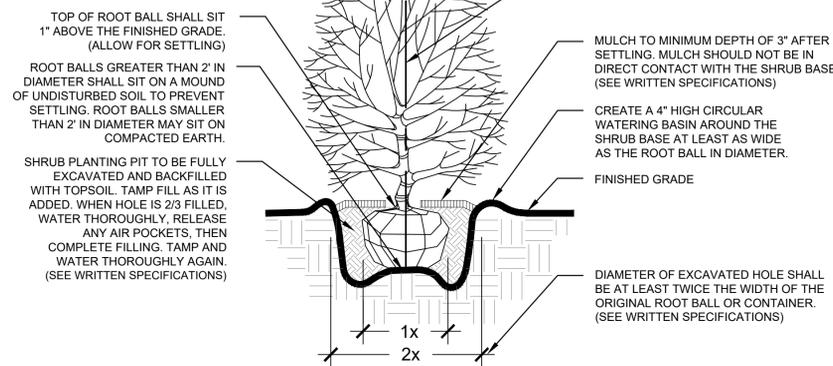
- NOTES:
1. ALL PALMS SHALL MEET FLORIDA #1 GRADE STANDARDS OR BETTER
 2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE PALM AND ROOT BALL.
 3. NO NAILS SHALL BE DRIVEN INTO PALM AND TRUNK SHALL BE FREE OF ANY MAJOR SCARS.
 4. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.



PALM PLANTING DETAIL

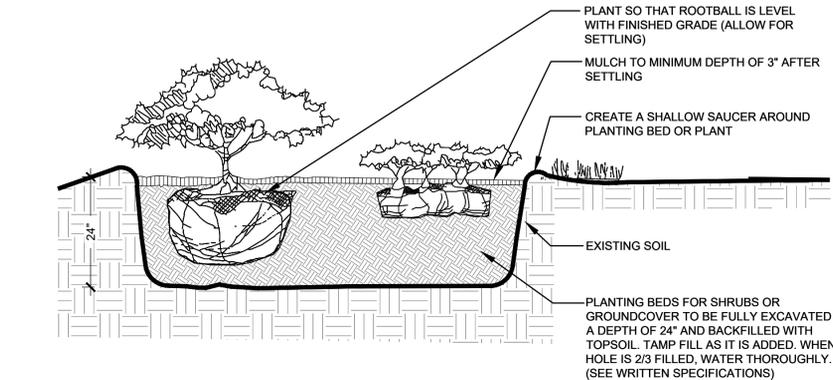
NOT TO SCALE

- NOTES:
1. ALL SHRUBS SHALL MEET FLORIDA #1 GRADE OR BETTER STANDARDS.
 2. REMOVE ALL NON-ORGANIC BINDING AND SHIPPING MATERIAL FROM THE SHRUB AND ROOT BALL.
 3. ANY PRUNING SHALL BE COMPLETED AT THE DIRECTION OF THE OWNER OR LANDSCAPE ARCHITECT.
 4. ADD FERTILIZER AS DIRECTED IN WRITTEN SPECIFICATIONS.



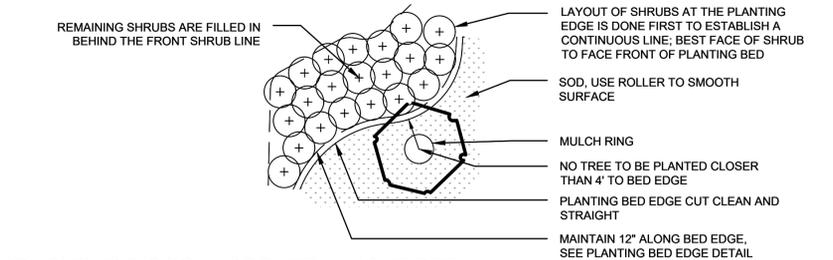
LARGE SHRUB PLANTING DETAIL

NOT TO SCALE



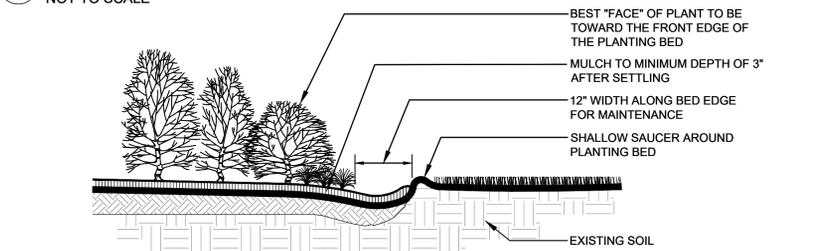
SHRUB AND GROUND COVER PLANTING DETAIL

NOT TO SCALE



SHRUB & GROUNDCOVER LAYOUT DETAIL

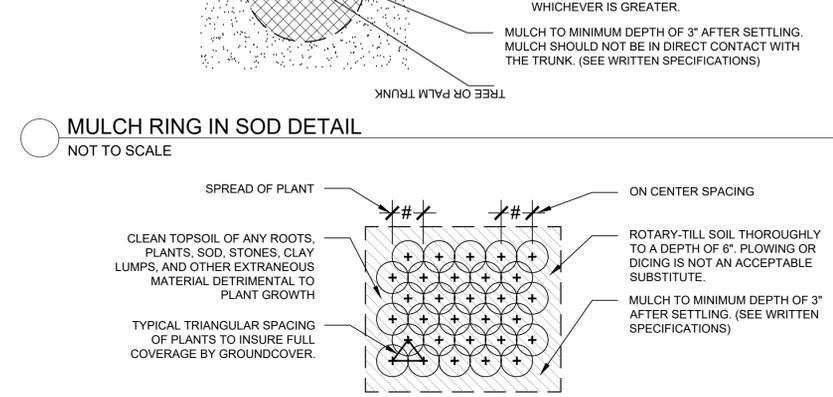
NOT TO SCALE



PLANTING BED EDGE DETAIL

NOT TO SCALE

- NOTES:
1. MULCH RINGS SHALL BE PROVIDED FOR ALL TREES AND PALMS PLANTED IN SODDED AREAS OR AS OTHERWISE NOTED ON LANDSCAPE PLAN.

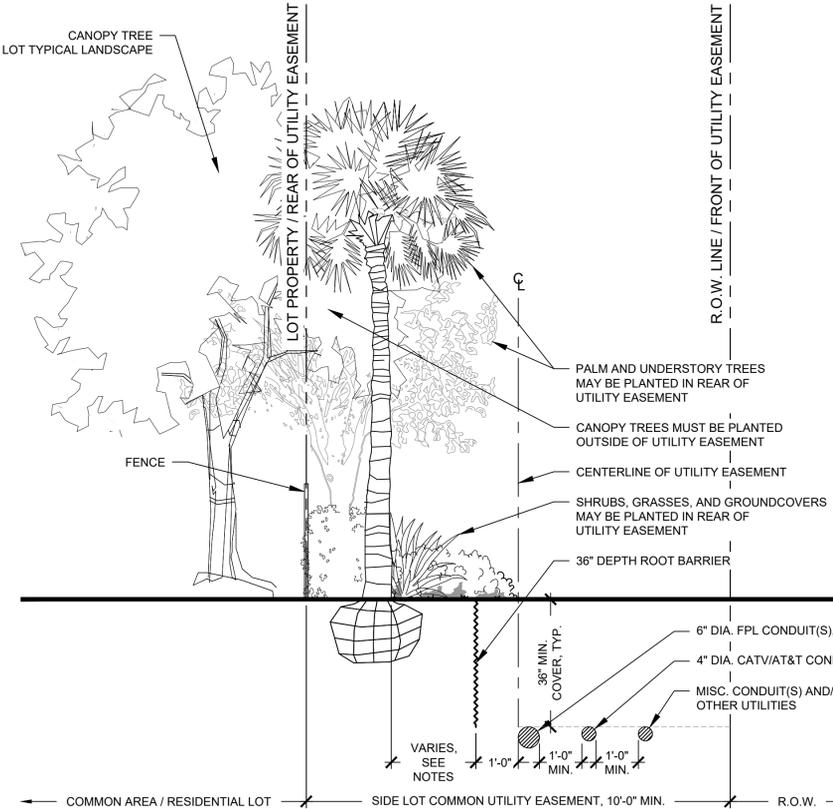


MULCH RING IN SOD DETAIL

NOT TO SCALE

GROUND COVERS & ROOTED CUTTING PLANTING DETAIL

NOT TO SCALE

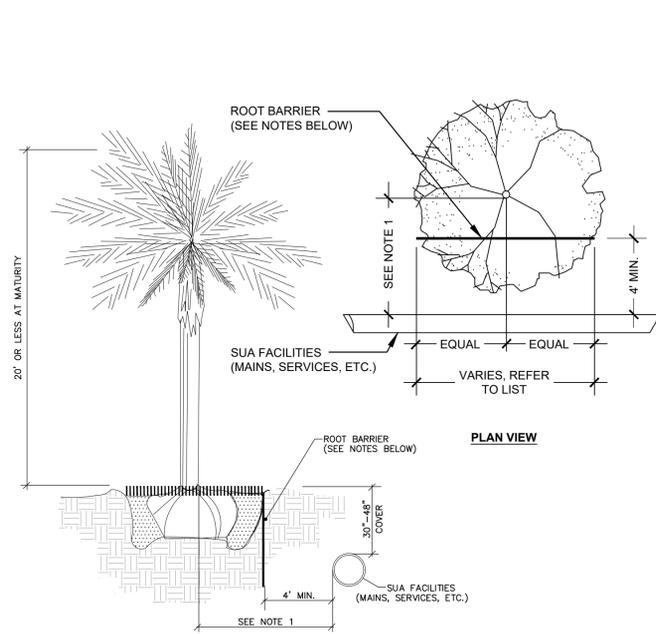


- NOTE:
1. 1'-0" MIN. FOR SHRUBS, GRASSES, AND GROUNDCOVERS; 2'-0" MIN. FOR PALM AND UNDERSTORY TREES
 2. DETAIL DOES NOT APPLY TO COMMON UTILITY EASEMENTS LOCATED IN FRONT OF LOTS

SIDE LOT COMMON UTILITY EASEMENT PLANTING DETAIL

NOT TO SCALE



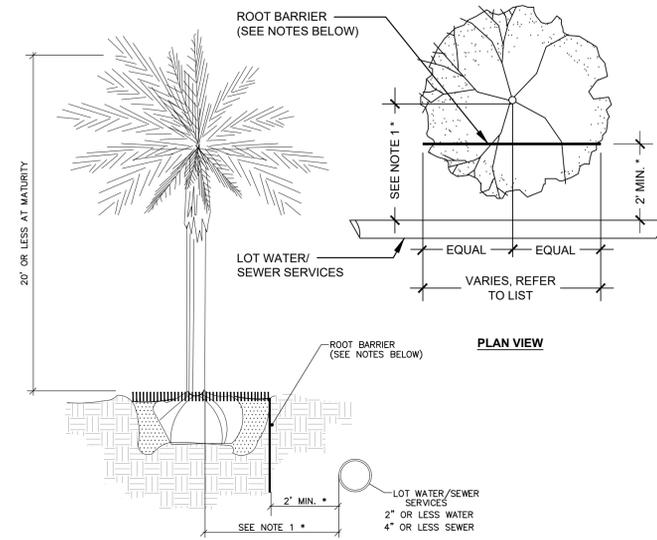


NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 7" MINIMUM WITH ROOT BARRIER AND 10" MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 4" MINIMUM FROM ALL SEACOAST FACILITIES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

Typical Shrub, Small Tree or Palm Tree with Root Barrier

AUGUST 26, 2020 (Rev C-16)

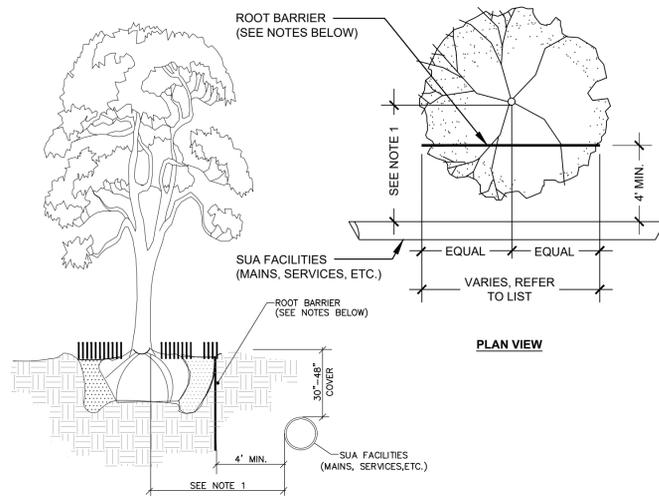


NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 4" MINIMUM WITH ROOT BARRIER AND 7" MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 2" MINIMUM FROM ALL SINGLE FAMILY SERVICE LINES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 24" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
6. * SHRUB PLANTING SHOULD BE MINIMUM 2' FROM LINE WITH A ROOT BARRIER 1' FROM LINE FOR PROTECTION.

Single Family Residential Lot Small Tree, Small Palm Tree and Shrubs with Root Barrier

August 26, 2020 (Rev A-19)

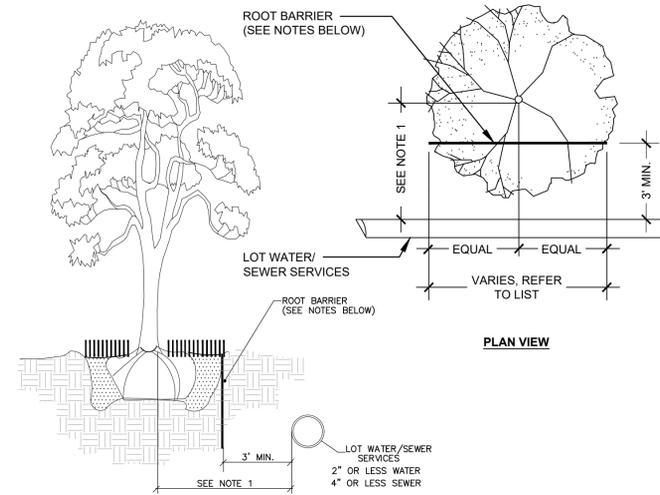


NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 10" MINIMUM WITH ROOT BARRIER AND 15" MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 4" MINIMUM FROM ALL SEACOAST FACILITIES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
6. LARGE PALM TREES INCLUDE ROYAL, WASHINGTONIAN, BISMARCK AND SIMILAR SIZED SPECIES.

Typical Canopy Tree, Large or Exotic Palm Tree with Root Barrier

AUGUST 26, 2020 (Rev C-16)



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 6" MINIMUM WITH ROOT BARRIER AND 10" MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 3" MINIMUM FROM ALL SINGLE FAMILY SERVICE LINES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 24" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT" AND "ROOT SOLUTIONS".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
6. LARGE PALM TREES INCLUDE ROYAL, WASHINGTONIAN, BISMARCK AND SIMILAR SIZED SPECIES.

Single Family Residential Lot Typical Canopy Tree, Large or Exotic Palm Tree with Root Barrier

August 26, 2020 (Rev A-19)

GENERAL NOTES:

1. WHEN NECESSARY, ROOT BARRIERS FOR TREES SHALL BE INSTALLED AT THE LENGTHS LISTED BELOW. IF A TREE SPECIES IS NOT LISTED, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF ROOT BARRIER.
2. GROUPINGS OF TREES MAY REQUIRE A CONTINUOUS ROOT BARRIER. IN THAT INSTANCE, THE LENGTH OF THE CONTINUOUS ROOT BARRIER SHALL EXTEND BEYOND THE TRUNK OF THE LAST TREE ON EACH END BY ONE-HALF OF THE LENGTH SPECIFIED FOR THAT TREE SPECIES.

11' LENGTH

- *Acrocalyptus wrightii* - Paurotis Palm
- *Adonia merrillii* / *Veitchia merrillii* - Christmas Palm
- *Bambusa mutabilis* - Emerald Bamboo
- *Caryota mitis* - Fishtail Palm
- *Chamaerops humilis* - European Fan Palm
- *Dypsis lutescens* - Areca Palm
- *Hibiscus rosa-sinensis* 'Seminole Pink' - Seminole Pink Hibiscus
- *Hyophorbe verschaffeltii* - Spindle Palm
- *Ilex x attenuata* 'East Palatka' - East Palatka Holly
- *Ilex x attenuata* 'Eagleston' - Eagleston Holly
- *Jatropha integririma* - Spicy Jatropha
- *Nerium oleander* 'Calypso' - Calypso Oleander
- *Ptychosperma elegans* - Alexander Palm
- *Rhapis excelsa* - Lady Palm
- *Sabal palmetto* - Cabbage/Sabal Palm
- *Strelitzia nicotai* - Giant Bird of Paradise
- *Thrinax radiata* - Florida Thatch Palm

21' LENGTH

- *Bismarckia nobilis* - Bismarck Palm
- *Coccoloba diversifolia* - Pigeon Plum
- *Coccoloba uvifera* - Seagrape
- *Cocos nucifera* 'Green Malayan' - Coconut Palm
- *Conocarpus erectus* - Green Buttonwood
- *Conocarpus erectus* 'Sericeus' - Silver Buttonwood
- *Cordia sebestena* - Orange Geiger Tree
- *Lagerstroemia* spp. - Crape Myrtle
- *Ligustrum japonicum* - Japanese Privet
- *Magnolia grandiflora* 'D.D. Blanchard' - Southern Magnolia
- *Myrica cerifera* - Wax Myrtle
- *Phoenix dactylifera* 'Medjool' - Medjool Date Palm
- *Phoenix sylvesteris* - Wild Date Palm
- *Roystonea elata* - Royal Palm
- *Tabebuia heterophylla* - Pink Tabebuia
- *Taxodium distichum* - Bald Cypress

31' LENGTH

- *Acer rubrum* - Red Maple
- *Bursera simaruba* - Gumbo Limbo
- *Delonix regia* - Royal Poinciana
- *Elaeocarpus decipiens* - Japanese Blueberry
- *Jacaranda mimosifolia* - Jacaranda
- *Manilkara zapota* 'Gigantea' - Sapodilla
- *Pinus elliotti* 'Densa' - South Florida Slash Pine
- *Quercus virginiana* - Southern Live Oak
- *Swietenia mahagoni* - Mahogany



0 15' 30' 60'
Scale: 1" = 30'-0"

Date: October 2021
Project No.: 12-065.044
Designed By: WVO
Drawn By: WVO
Checked By: WT

Revision Dates:

PBG Submittal: 11.04.2021
PBG Resubmittal: 07.29.2022
PBG Resubmittal: 09.02.2022
PBG Resubmittal: 09.22.2022



**SECTION 02950
TREES, SHRUBS AND GROUND COVER**

PART I - GENERAL

By bidding on this project and/or signing a contract for landscape work, the Contractor acknowledges that he/she has read and understood these specifications in their entirety, that he/she has inspected the site, and that he/she will abide by all plans, specifications, and conditions found herein. Any persons within the specifications or on the plant list including unavailability of materials, are to be brought to the attention of the Landscape Architect prior to bid submission.

1.01 WORK INCLUDED

- A. Contractor shall obtain or ensure that all necessary permits have been granted to the Owner for work on the Owner's properties or in any adjacent easements prior to commencement of work.
- B. All planting and construction work shall be executed as shown on the provided drawings, schedules, and specifications.
- C. Any additional work items required to install landscape elements as called for on the plans, specifications or plant list shall be provided and installed by the Contractor.
- D. Finish Grade Elevations: 2 inch below top of pathway edging.
- E. The Contractor shall be entirely responsible for all work until final acceptance by the Owner. The Contractor shall protect all materials and work against injury and shall provide and maintain all necessary guards for the protection of the public. He shall be held responsible for any negligence during the execution of the work.

1.02 QUALITY ASSURANCE

- A. All work specified herein shall be performed by a single firm specializing in landscape work. The Landscape Architect and the Owner retain the right to approve any proposed subcontractors prior to awarding the contract.
- B. Ship landscape materials with certificates of inspection required by governing authorities. Comply with all regulations applicable to landscape materials.
- C. Package standard products with manufacturers certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable.
- D. Provide trees, palms, shrubs and groundcover grown in a recognized nursery in accordance with good horticultural practice. Materials must be healthy and vigorous, free of disease, insects, eggs, larvae, and defects such as decay, rot, knots, sun scald, injuries, abrasions, and poor or unusual form. No collected material will be permitted unless specific written approval is granted.
- E. Do not make substitutions. If specified landscape material is not available at time of planting, submit proof of non-availability and provide a list of proposed equivalent material. Once authorized, adjustments to the contract will be made. Owner is not financially responsible for unauthorized substitutions.
- F. Plant materials larger than size than specified may be used if acceptable to Landscape Architect and if sizes of root balls are increased proportionately. Installation of larger sizes will not increase contract amount unless specifically authorized by Owner.
- G. Owner and Landscape Architect reserve the right to inspect, approve or reject at any time plant materials or work either at the nursery or at the site which does not meet the condition in the plans, plant list or specifications.
- H. The Contractor shall be responsible for planting the landscape in complete accordance with all applicable codes, ordinances, and laws. Any modification made to conform with said codes, laws and ordinances, after the bid is awarded, shall be completed at the Contractor's expense at no additional cost to the Owner.

1.03 SUBMITTALS

- A. Certification: Submit certificates of inspections as required by governmental authorities, and manufacturers or vendor's certified analysis for soil amendments and fertilizer materials. Submit other data substantiating that materials comply with specified requirements.
- B. Submit seed vendor's certified analysis for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentage of purity, germination, and weed seed for each grass seed species.
- C. Planting Schedule: Submit planting schedule showing schedule dates for each type of planting in each area of site.
- D. Maintenance Instructions: Submit typewritten procedures for maintenance of landscape work, through final acceptance.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original containers showing manufacturer's guaranteed weight analysis and name of manufacturer. Protect materials from damage and deterioration during delivery and storage.
- B. Trees, shrubs, and ground covers: Provide freshly dug trees, palms, and shrubs. Do not prune prior to delivery. All plants shall be handled and stored so they are adequately protected from drying out, from sun or wind burn, and from any other injury at all times. Any plant determined to be wilted or burned may be rejected at any time, whether in the ground or not. Plant materials handled only by their containers or root balls, not by stems or trunks. Trees that are scraped or scamed during delivery, storage, or planting will be rejected. The on-site storage area shall be approved prior to the delivery of any plant materials. Do not bend or bond plants in such a manner as to damage bark, break branches, or destroy natural shape. Provide protective covering during delivery.
- C. Deliver plant materials after preparations for planting are complete, and plant immediately. Roots or balls of all plants shall be adequately protected at all times from sun and/or wind. Balled and burlapped (B&B) plants that cannot be planted immediately upon delivery shall be set on the ground and protected by having soil, wet peat, or other acceptable material covering the roots or balls keeping them moist.
- D. Do not remove containers from planters until planting time.
- E. Label at least one tree, one palm and one shrub of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name, if requested by Owner.
- F. Sod: Time delivery so that sod will be placed within 24 hours after stripping. Protect sod against drying and breaking of rolled strips.

1.05 JOB CONDITIONS

- A. Proceed with and complete landscape work as rapidly as portions of site become available.
- B. Utilities: Determine location of overhead and underground utilities and perform work in a manner which will avoid possible damage. Hand excavate, as required. Forty eight (48) hours prior to digging, call the appropriate Utility Authority to have all utilities identified and marked in order to avoid conflicts.
- C. Protection of Existing Structures: All existing buildings, walks, walls, paving, piping, and other items of construction and planting already completed or established shall be protected from damage. All damage resulting from negligence shall be repaired or replaced, including but not limited to marks on pavers and cracks within existing walkways caused by the Contractor. The Owner may, at his discretion have any damage repaired by others and subsequently costs back-charged to the Contractor.
- D. Protection of Existing Plant Material: The Contractor shall be responsible for all unauthorized cutting or damage to existing trees or shrubs caused by careless operation of equipment, stockpiling of material, or driving or parking inside the drip-line of any tree, or spilling of oil, gasoline, or other deleterious materials within the drip-line of any tree. No materials shall be burned.
- E. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions, or obstructions, notify Landscape Architect before planting.

PART II - PRODUCTS

2.01 TOPSOIL

- A. The Contractor is required to obtain a soil sample and perform a soil analysis test to determine the existing soil composition and conclude whether it complies with the composition criteria below.
- B. Where topsoil does not meet the specified limits within the project site, it shall be furnished. Throughout all parts of site where finish grades and contour lines differ from existing contour lines, bring to finish grade contours shown on "Grading Plan."
- C. Topsoil shall be friable, fertile soil with representative characteristics of local soils. It shall be free of heavy clay, marl, stone, extraneous lime, plant roots, refuse and/or soil waste, sticks, brush, construction debris and any other deleterious materials. There shall be no noxious weeds or weed seeds (i.e., nut grass, Bermuda grass and the like). In no case shall there be more than five percent (5%) by dry weight of clay lumps or stones larger than 1". It shall test in the pH range of 6.0 to 7.2 and shall contain no substance that will impede plant growth. The Contractor shall provide topsoil laboratory-tested at his expense and approved by Landscape Architect or Owner prior to material delivery.

Topsoil shall conform to the following specifications:

COMPONENTS	DRY WEIGHT MEASURE	PARTICLE SIZE
Organic Matter	2% - 7%	
Silt/Clay	2% - 10%	< 0.074 mm
Sand	85% - 98%	0.075 - 3.00 mm
Gravel	0% - 5%	4.75 mm - 1 inch

The analysis shall also show the following ranges:

Soluble salt	2 - 1.0mmhos/cm
Nitrogen	25-150 PPM
Phosphorus	26 - 39 PPM
Potassium	50 - 250 PPM
Calcium	500 - 2500 PPM
Magnesium	50 - 500 PPM
Iron	2.5 - 25 PPM
Manganese	2.5 - 25 PPM
Zinc	2.5 - 25 PPM
Copper	1.3 - 5 PPM
Boron	0.5 - 1.5 PPM
Sulphur	15 - 200 PPM
Chlorine	less than 100 PPM
Sodium	less than 10
Nematodes	none

2.02 SOIL AMENDMENTS AND FERTILIZERS

- A. Peat Moss: Peat Moss shall be a commercial, baled sphagnum material, free of woody material, minerals, or foreign matter, with a pH range of 3.0 - 5.5.
- B. Sand: Sand shall be clean, sharp, and free of all deleterious material.
- C. Lime: Natural limestone (Dolomite) containing not less than 85% of total carbonates, ground so that not less than 90% passes a 10-mesh sieve and not less than 50% passes a 100-mesh sieve.
- D. Humus Soil Conditioner: Consisting of yard trimmings and biosolids co-compost.
- E. Fertilizer: Fertilizer shall be a commercial grade, granular, slow release "pre-plant" type fertilizer.
 - 1. Fertilizer shall be delivered to the site in the original unopened container, bearing the manufacturer's guaranteed analysis. Any opened, caked, or damaged fertilizer will be rejected.
 - 2. Tree, palm, shrub and grass fertilizer shall be "UF (University of Florida) Formulated" product 8-2-12 or 8-2-13 with minor elements as an all-purpose fertilizer, or equal, and applied according to the manufacturer's direction.
 - 3. Application of fertilizer shall be consistent with the current recommendations of the Green Industries - Best Management Practices.
- F. Fertilizer shall be applied by an individual who has successfully completed the GI-BMP program and holds a current Urban Fertilizer License or as required by the State and Local Ordinances.

2.03 WATER

- A. All water necessary for planting and maintenance shall be of satisfactory quality to sustain adequate growth of plants and shall not contain harmful, natural or man-made elements detrimental to plants.
- B. **2.04 OTHER LANDSCAPE PRODUCTS**
 - A. Mulch: Mulch shall be shredded Melaleuca, Eucalyptus, Grade "A" Pine Bark Nuggets, or approved equal, free of foreign materials and weed seeds. Minimum depth after settling shall be 3".
 - B. Guying and Bracing: Tree guying and bracing shall be the responsibility of the Contractor in accordance with the planting details to insure stability and maintain plants in an upright position.
 - C. Anti-desiccant: Anti-desiccant shall be "Wiltpur" or equal, if specified on plans.
 - D. Tree Wound Paint: Tree wound paint shall be an asphaltic base paint containing an antibacterial agent, specially prepared for tree surgery work.
 - E. Super Absorbent Polymer: "Terra Sock" or approved equal as packaged in 3 oz. Handy Pac containers of synthetic acrylamide copolymer, potassium, acrylate. Particle size of 1.0 mm to 3.0 mm and absorption rate of 300 times its weight in water, if specified on plans.

Apply dry, using the following amounts:

- 1. For trees and palms up to 36" diameter root ball, use one 3 oz. Handy Pac.
- 2. For trees and palms over 36" diameter root ball use two 3 oz.
- 3. Handy Pacs. Broadcast throughout planting hole and backfill as per manufacturers specifications.

For container grown plants:

Container Size	Application Rate
1 Gallon	1 Handy Pac / 9 Containers
3 Gallons	1 Handy Pac / 4 Containers
7-10 Gallons	1 Handy Pac / 2 Containers
20 Gallons	1 Handy Pac / 1 Container

2.05 PLANT MATERIAL

- A. Plant list is part of this specification section. The Contractor shall be responsible for furnishing and installing all plant materials shown on the drawings and plant list. In case of conflict between the two documents, the drawings shall prevail.
- B. Quality: Trees, palms, shrubs, and other plants shall be Florida #1 or better as defined in the latest edition of Grades and Standards for Nursery Plants, Florida Department of Agriculture and Consumer Services. Multi-trunked trees will not be accepted unless they are specifically specified in the planting plans. All plants shall have a normal habit of growth and shall be sound, healthy, and vigorous. Trees shall have normal well-developed branching structures and vigorous root systems that are not root or container bound.
 - 1. Balled and burlapped plants (BB or b&b) shall be dug with firm, natural balls of earth, of sufficient depth and diameter to include the fibrous and feeding roots. Plants with cracked, dry, or broken balls will not be accepted, nor will plants with root balls of insufficient size.
 - 2. All plants, other than those collected on site, shall be nursery grown in accordance with good horticultural practices and under climatic conditions similar to the site for at least two years. Transplanting or root pruning shall have taken place during growth.
- C. Size: Plant sizes shown in the plant list are minimums. When a plant size is given by height and spread or by container size, all specifications are minimums to be met or exceeded. All trees and shrubs shall be measured when their branches are in a normal position. Spread dimensions specified refer to the main body of the plant and not from extreme branch tip to tip. Height is measured from the soil line to the average height of the canopy. Measurement does not include any terminal growth; the container or root ball is also not included.

Unless otherwise specified, the determining measurement for trees shall be caliper, which shall be measured 6" above the ground for trees up to 4" in caliper, and 12" above the ground for trees over 4" caliper.

2.06 GRASS MATERIALS

- A. Types: Sod type shall be as specified on the provided landscape plan and associated plant schedule.
- B. Dimensions: The sod shall be taken up in commercial size rectangles, preferably 12-inch x 24-inch, re-ramp, and water again.
- C. Measurement: Sod shall be measured on the basis of square footage. Contractor shall be responsible for complete coverage based on the square footage shown on plans; therefore, Contractor shall factor in cutting and shrinkage of materials.
- D. The sod shall be sufficiently thick to provide a dense stand of live grass. The sod shall be live, fresh and un injured; at the time of planting, it shall be a soil mat of sufficient thickness, at least 2" thick, and offering firmly to the roots to withstand all necessary handling. It shall be free of weeds and other grasses. It shall be planted as soon as possible after being dug, and shall be shaded and kept moist from the time it is dug until it is planted. After approval, the area from which the sod is to be harvested shall be closely mowed and raked as necessary to remove excessive top growth and debris.

2.07 REJECTION, SUBSTITUTION, AND RELOCATION

- A. All plants not conforming to the requirements herein specified shall be considered defective and such plants shall be marked as rejected and removed from the site whether in the ground or not, at the Contractor's expense. Such removal shall take place immediately and new plants shall be brought in as replacements. The plant materials must meet all applicable inspections required by law.
- B. The Owner or Landscape Architect also reserves the right to require that plants be relocated after installation if their initial installation does not conform to the plans or the intent of the plans, or if the original location poses an unforeseen threat to other facilities, human life, health, or safety, or to site utilities. Such relocation shall be at the Contractor's expense.

PART III - EXECUTION

3.01 GENERAL

- A. Proceed with and complete landscape work as rapidly as portions of the site become available.
- B. No planting shall be done until all operations in conjunction with the installation of the sprinkler system have been completed, final grades have been established, planting areas have been properly graded and prepared.
- C. Adverse Conditions: When conditions potentially detrimental to plant growth are encountered during construction, such as rubble or refuse fill, adverse drainage conditions, or obstructions, notify Owner or Landscape Architect before planting.
- D. Work Scheduling: Work is to be scheduled to establish a logical sequence of steps for completion of each type and phase of landscape work, in such a way as to correspond with, and avoid damage and conflict with, other disciplines on site.
- E. Coordination with Other Trades: Plant trees, palms, and shrubs only after final grades are established, and prior to sodding or lawn establishment. If such planting must be done after lawn work, protect lawns/sod areas during planting and promptly repair any resulting damage.
- F. Timing:
 - 1. Planting work shall not be started until the final subgrade has been established, berms have been constructed and fine finished grading completed.
 - 2. Under no conditions shall work be done if weather or soil conditions are not satisfactory.
- G. Clean-up:
 - 1. At all times during the construction and installation, the site shall be maintained in a clean, orderly and safe condition. Streets and pavements shall be kept clean. Materials and equipment for planting work shall be limited to the quantity required for the particular phase of work currently underway on the job site.
 - 2. Protect landscape work and materials from damage due to landscape installation and maintenance operations, operations by other contractors and trades, and trespassers. Maintain protection during installation, Maintenance and Establishment periods. Treat, repair or replace damaged landscape work as directed.

3.02 SOIL PREPARATION

- A. Grading and soil preparation work shall be performed only during periods when best results can be obtained. If the moisture content of the soil is high enough that work would damage soil structure, grading and tilling operations shall be suspended.
- B. Before mixing in soil amendments, clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful or toxic to plant growth. Apply Herbicide to weed control as needed.
- C. Mix specified soil amendments and fertilizers with topsoil at rates specified. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.

- D. For planting beds, mix planting soil either prior to planting or apply on surface of topsoil and mix thoroughly before planting.
 - 1. Mix lime with dry soil prior to mixing of fertilizer.
 - 2. Prevent lime from contacting roots of acid-loving plants.

- E. Unless drawings indicate otherwise, berms shall not exceed a 3:1 slope. Berms near buildings or in potentially troublesome drainage situations shall be checked for correct drainage by the project Engineer or Owner prior to planting.
- F. Tree and shrub planting locations which fall within or near parking lot areas shall be completely excavated and back-filled with topsoil. All shell-rock or other large materials, and all subsoil and debris, shall be completely removed from beneath such planting areas, to a minimum depth of 24".
- G. All tree and/or shrub planting areas within 36" of building foundations, and any other planting areas where significant buried construction debris is encountered, shall be excavated to a minimum depth of 24" and backfilled with topsoil as specified elsewhere in these specifications.

3.03 TILLING

- A. Before mixing, clean soil of roots, plants, clay lumps, stones in excess of 1" in diameter, and other extraneous or potentially harmful materials.
- B. After all soil conditioning (and topsoil if called for on plans) has been spread at specified rates, the areas to be planted should be thoroughly rotary-tilled to a depth of six (6) inches. Plowing or dicing is not an acceptable substitute for rotary-tilling.
 - 1. If the sprinkler system is installed after grading and tilling is completed, the backfill shall be retilled in the affected areas.
 - 2. The subsoil, grading, topsoil addition, soil conditioning, and tilling have been accomplished, all areas or sods treated shall be compacted and settled by application of heavy irrigation to a minimum depth of twelve (12) inches. Erosion scars shall be repaired.

3.04 FINE FINISH GRADING

- A. When preliminary grading has been completed and the soil has dried sufficiently to be readily worked, all lawn and planting areas shall be graded to the elevations indicated on the Engineering Plans. The top four (4) inches shall be completely free of stones larger than one (1) inch. Grades not otherwise indicated shall be uniform levels or slopes between points where elevations are given. Positive drainage away from buildings shall always be maintained. Surface drainage shall be directed as indicated on the drawings by remodeling surfaces to facilitate the natural run-off of water. All depressions where water will stand, all voids, erosion, settled trenches and excavations, and all ridges and rises shall be amended and/or removed leaving a smooth, even finish grade. If additional amended topsoil is required to accomplish the intent of this specification, it shall be according to the foregoing specifications for topsoil.

- 1. All area shall be graded so that the final grades are 2" below adjacent paved areas, sidewalks, valve boxes, moving strips, clean-outs, drains, etc., with appropriate adjustments for varying sod thicknesses. The intent is for water always to drain away from paving into lawns/sod areas.
- 2. Eliminating all erosion scars prior to beginning planting.
- 3. The Owner and/or his representative shall approve all final finish grades prior to planting.

- B. Prior to fine grading or the installation of plant material the Contractor shall obtain certification from the project area grade levels proposed by the Civil Engineer or Landscape Architect from a licensed Surveyor. The Contractor shall fine grade the lawn and planting areas to bring the rough grade up to final finished grade allowing for thickness of sod and/or mulch depth.

3.05 PLANTING TREES AND PALMS

- A. LAYOUT INDIVIDUAL TREE LOCATIONS AND AREAS FOR MULTIPLE PLANTINGS. Stake all locations and outline areas, then secure Landscape Architect's acceptance before the start of planting work.
- B. Prior to preparation of tree pits, ascertain the location of all electrical cables, all conduits, all utility lines, oil tanks and supply lines, so that proper precautions may be taken not to disturb or damage any existing conditions. Properly maintain and protect existing utilities. Should such underground or overhead obstructions be encountered that interfere with planting, the Contractor will inform the Landscape Architect or Owner's representative and shall be consulted as to the adjustment of the location of plants to clear such obstruction or the relocation of the obstruction.
- C. Tree pit locations shall be staked by the Contractor and approved by the Owner or Landscape Architect before digging. Pits shall be excavated to the depth and width indicated and all subsoil removed.
- D. Protect all areas from excessive compaction by foot traffic or machinery when bringing trees to the planting area.
- E. All excavated holes shall have vertical sides with roughened surfaces and shall be of a size that will easily receive the width of the original plant container or ball. In all cases the holes shall be large enough to permit handling and planting without damage to the roots or root ball.
- F. Excess soil shall be removed or utilized as directed by Owner or the Owner's representative. If the excess soil will not be used, it is the responsibility of the Contractor to remove and dispose of the discarded soil off site in an acceptable manner.
- G. Tree pits shall be backfilled with a topsoil mixture as specified elsewhere in these specifications. Palm tree pits will be backfilled with a mixture of up to 95% sand and 5% organic material.
- H. Add fertilizer to tree pits as specified elsewhere in these specifications.
- I. Set balled and burlapped sod on a layer of 50% native soil and 50% topsoil compacted to a depth of 12" around the top of the root ball. Top sides of the ball but no burlap shall be pulled from underneath. Remove non-organic binding material (if any) from tree ball. Immediately cut any damaged roots with clean shears. Using a plumb to assure that the tree is properly upright, begin filling the hole and tamping the fill material. When the hole is 2/3 filled, water thoroughly and probe with a stick to be sure that no air pockets remain. Re-plant, complete filling the hole, re-ramp, and water again.
- J. Set container-grown stock as above, taking care not to damage roots when removing the container.
- K. During planting, do not cover the top of the root ball with the soil mixture. All rope, wires, burlap mesh etc., shall be removed from the root ball. No synthetic burlap is allowed on any plant material. Synthetic burlap is unacceptable for rootballs. Trees shall be planted so that the top of the root ball is 2" above final grade. Allow for settling. Any trees resting deeper or higher must be either reset or replaced at the discretion of the Owner or Landscape Architect; such work shall be at the Contractor's expense.
- L. Create a watering basin around each tree at least as wide as the root ball in diameter formed by a circular ridge of soil at least 6" high.
- M. Each planting location shall be protected with a minimum depth of 3" (after settling). Mulch shall be applied until the tree has been thoroughly watered and two days have elapsed. Mulch should be placed so that it is not in direct contact with trunks.
- N. All trees are to be staked or guyed per these specifications. All stakes shall be painted a conspicuous color or shall be flagged for visibility and public safety; guy wires shall be painted a conspicuous color.
- O. Palms shall be planted per above specifications.

3.06 PLANTING SHRUBS, VINES, AND GROUND COVERS

- A. The locations of all plants, bed outlines and all other areas to be planted shall be clearly marked with agricultural gypsum or landscape marking paint then approved by the Owner or Landscape Architect before any holes are dug.
- B. No planting shall be done until the area concerned has been satisfactorily prepared in accordance with these specifications.
- C. No more plants shall be distributed in the planting area on any work day than can be planted and watered in that day.
- D. Unless otherwise indicated, all plants shall be planted in pits, centered as called for on the plant list, and set in 24" depth of topsoil as specified elsewhere in these specifications to such depth that the soil line of the plants will match the surrounding grade after settling. Plants shall be planted in a vertical position and oriented to give the best possible appearance or relationship to adjacent structures or features. Remove all inorganic containers or binding. All damaged roots shall be cut away cleanly. Planting soil shall be placed and compacted carefully to fill all voids and avoid root injury. When the hole is 2/3 filled, water thoroughly. The hole shall then be filled to finish grade and a shallow saucer shall be formed around each bed. After settling, soil shall be added as needed to bring the hole to grade level.
- E. Azaleas and other ericaceous and acid-loving plants shall be backfilled with a mixture of 20% topsoil and 80% acid peat. The soil shall be set so that the bases of the plants are slightly higher than they grew in the container or nursery after settling. At no time shall lime in any form be brought into contact with the plants or their roots. Mulch with pine straw unless noted otherwise.
- F. Add fertilizer to plants as outlined in section 2.02.
- G. Vines shall be planted in pits containing at least 2 cubic feet of prepared topsoil. They shall be planted in the same manner as shrubs, and shall be mulched. Vine stems shall be fastened to walls, trellises, etc. as specified in the drawings.
- H. Groundcover plants shall be laid out in their proposed planting locations without being removed from their containers after the soil is properly prepared per these specifications. Phase of work currently underway on the job site.
 - 1. Any plants which, after setting, rest significantly higher or even slightly lower than they grew in the nursery or container are subject to resetting or replacement at the discretion of the OWNER or Landscape Architect. Such work shall be at the Contractor's expense.
 - 2. If called for in the plans, landscape edging shall be installed as specified.
- K. All planting beds and individual plants shall be mulched with a minimum of 3" (after settling) of mulch as specified in this document. Mulch shall be free of weed seeds and other foreign matter.

3.07 ANNUAL AND SEASONAL COLOR BEDS

- A. Vines shall be planted in pits containing at a height 6" on top of the existing grade and composed of 50% topsoil and 50% compost.
- B. Soil shall be covered with 1/2" - 1" deep layer of Pine Fines Mulch or comparable product.

3.08 PRUNING

- A. All pruning shall be done in the presence of, and with the approval of, the Owner or

- Landscape Architect. Only clean, sharp tools designed for the purpose shall be used. The goal of pruning is always to preserve and enhance the natural character of the plant. Pruning shall be done per modern horticultural practice (see National Arborist Standards, latest edition).
 - B. Pruning shall be limited to the minimum necessary to remove injured twigs, branches, and roots, to compensate for root loss suffered during digging and transplanting, and to thin and shape trees and shrubs. Pruning shall be done in accordance with the following structure be removed. Damaged, scarred, frayed, split, or skinned twigs, branches, or limbs shall be pruned back to the next sound outside lateral bud, branch or limb. The terminal bud or leader shall never be removed.
 - C. Prune trees and shrubs to retain required height and spread. Remove the minimal amount of wood necessary to remove dead or dying fronds from palms. Cuts over 3/4" in diameter shall be treated with tree wound paint; all exposed living tissue shall be covered.
 - D. Existing Trees: If indicated on drawings, Contractor shall prune and thin existing trees on site. The use of climbing spurs is prohibited. All diseased, dead branches and those interfering with power lines shall be removed. Pruning shall be done in accordance with the following structure be removed. Damaged, scarred, frayed, split, or skinned twigs, branches, or limbs shall be pruned back to the next sound outside lateral bud, branch or limb. The terminal bud or leader shall be painted with tree paint. Remove any cuts, wires, etc. fastened to the tree.

3.09 PLANTERS - DECORATIVE OR STRUCTURAL

- A. If specified, landscaping in planters shall be installed using the following method:
 - 1. Install 4" deep layer of fine crushed stone in bottom of planter.
 - 2. Install filter fabric over stone layer. Turn up edges of fabric all around.
 - 3. Install planting soil mix over filter fabric to within 3/4" of top for planter. Do not compact planting soil.
 - 4. Install plant material as specified elsewhere in these specifications.
 - 5. Install 3" of mulch over planting soil.

3.10 SODDING NEW LAWNS

- A. The Contractor shall sod all areas indicated and noted on the drawings. No sodding shall occur until the soil has been graded and any rough grass or weeds are cleared. The ground brought to an even grade and specified amendments have been added. See details for specific amendments as per sod type.
 - B. Whenever a suitable area has been graded and is ready for sodding the Contractor shall, when directed by the Landscape Architect, proceed at once with the sodding of the available area. Sod shall be placed on the prepared surface, with edges in close contact, and shall be firmly and smoothly embedded by light tamping with appropriate tools. Sod shall be rolled with 1,000 lbs. roller unless waived by the Landscape Architect or Owner.
 - D. Where sodding is used in drainage ditches, sod panels shall be set in a staggered pattern, such as to avoid a continuous seam along the line of flow. Offsets of individual strips shall not exceed 6 inches (6) inches. Sod shall be laid in a staggered pattern.
 - E. On areas where the sod may slide, due to height and slope, the Landscape Architect or Owner may direct that the sod be pegged, with pegs driven through the sod blocks into firm earth, at suitable intervals.
 - F. Any pieces of sod which, after placing, show an appearance of extreme dryness shall be removed from the work.
 - G. Where placement of new sod abuts existing sodded areas, new sod must be placed in such a manner as to produce an even transition to existing sodded areas.
 - H. It shall be the responsibility of the Contractor to bring the sod edge in a neat, clean manner to the edge of all paving and shrub areas.

PART IV MAINTENANCE, ESTABLISHMENT AND WARRANTY PERIODS

4.01 MAINTENANCE AND ESTABLISHMENT PERIOD

- A. The Maintenance Period shall begin immediately after each plant is planted, and the Contractor shall continuously maintain all areas involved in this contract during the progress of the work.
- B. The Establishment Period shall begin on the first day after all planting and installation of all landscape elements is completed and initially accepted. The Contractor shall continuously maintain all areas from initial acceptance until final acceptance by the Owner. The Establishment Period shall continue for not less than ninety (90) continuous calendar days. Hurricane cut Sabal Palms shall have an Establishment Period of not less than one hundred and eighty (180) calendar days. The Establishment Period will end at the time the project is given final acceptance. An inspection shall be made by the Owner or Landscape Architect to accept the completed work and issue a determination of substantial completion. Inspections may be performed on all or partially completed phased work under the Contract, as directed by the Owner.
- C. The maintenance and establishment shall consist of, but not necessarily be limited to, pruning, watering, cultivating, weeding, mulching, lightening or replacing guys and stakes, resetting plants to proper grades or upright positions, furnishing and applying sprays as necessary to combat insects and disease, litter control, rolling, fertilizing and replanting.
- D. Planting areas and plants shall be protected at all times against damage of any kind for the duration of the maintenance and establishment periods. Any plants are injured or damaged they shall be treated or replaced as directed by the Owner or Landscape Architect at no additional cost. The Contractor is responsible for acts of vandalism or theft during the maintenance and establishment period unless this responsibility is assumed in writing by another party.
- E. The Contractor is responsible for keeping all plant materials adequately watered after installation even if the irrigation system is not operational. Plants shall receive a thorough watering immediately after planting. Afterwards, plants shall be watered during the maintenance and establishment periods per the requirements set forth in "Water Requirements for Newly Planted Grass, Ground Covers, Shrubs and Trees in Florida," published by the Florida Water Management District. In those areas where a permanent irrigation system will not be provided, the Contractor is responsible for implementing the Watering Program identified in the Landscape Plans.
- H. The Landscape Contractor is responsible for keeping all plant materials adequately fertilized throughout the Maintenance and Establishment Periods. Fertilizer shall be applied at a rate to keep plants and shrubs healthy. All fertilizer shall be done under the direction of a licensed fertilizer operator.
- I. The Landscape Contractor shall control disease and pest infestations in the planting area. Upon approval, the Contractor shall implement the control measures, exercising extreme caution in using hazardous materials and taking all necessary steps to protect others and not to harm the job site. The contractor's pest control shall be done under the direction of a licensed disease and pest control operator.
- J. Herbicide Weed Control: All landscape areas shall be free of nut grass, torpedo grass, and other noxious weeds until final acceptance of work.

- 1. "Round-up" shall be applied to all planting areas as needed and determined on-site by the Owner for weed control. Apply per manufacturers specifications.
- 2. "Ronstar" pre-emergent or OWNER - approved equal, shall be applied 2 weeks before planting. Apply per manufacturers specifications.
- 3. Apply "Fusilade" in all areas where torpedo grass has emerged. Apply per manufacturers specifications.
- 4. Apply "Basagran" or "Marage" in all areas where nutgrass has emerged. Apply per manufacturers specifications.

- K. Mowing of turf will commence ten (10) days after installation. The height of cut will be 3". After the first cut, the Contractor shall adjust the frequency of mowing so that at each mowing the grass is cut to a uniform height and no grass is removed per cutting.
- L. Between the 15th and 20th day of the Establishment Period, the Contractor shall re-sod all spots or areas within the lawn where normal turf growth is not evident. Turf must be well established and free of bare spots and weeds to the satisfaction of the OWNER or Landscape Architect prior to final acceptance. All planted areas other than lawn shall be weeded at intervals and 80% acid peat. Weeding shall be done every (10) days.
- M. Application of fertilizer to be done between the fortieth (40) and fiftieth (50) day of the establishment period. Landscape Architect or Owner are to be notified a minimum of forty eight (48) hours in advance.
- N. Improper maintenance or poor condition of any planting at the time of the termination of the scheduled Establishment Period may cause postponement of the final acceptance of the contract. Any material found to be dead, missing, or in poor condition during the establishment period shall be replaced immediately. Maintenance shall be continued by the Contractor until the work is acceptable.
- O. Inspection and Final Acceptance:
 - 1. In all cases the Landscape Architect will perform an initial and final inspection at the beginning and end of the Establishment Period, respectively. It is the responsibility of the Contractor to notify the Owner or Landscape Architect of the beginning and end of this period and to submit a written request for an inspection ten (10) days in advance.
 - 2. Following inspection(s), the Landscape Architect will prepare a listing of outstanding items to be addressed prior to final acceptance. Final acceptance will be given once the outstanding items are completed, and the work performed to the satisfaction of the Landscape Architect and OWNER.
 - 3. Any material that is 25% or more dying shall be considered dead and must be replaced at no charge. A tree shall be considered dead when the main leader has died and when 25% of the crown is dead. A tree that has suffered significant leaf drop but shows signs of life may be left for later re-inspection. Such trees shall be subject to removal and replacement at any time up to and including the first re-inspection, as requested by the Owner or Landscape Architect. The Warranty Period for such trees shall not begin until after the second re-inspection.

4.02 WARRANTY PERIOD

- A. Unless a different agreement is reached in writing between the Owner and the Contractor, all trees and other plant material, including ground covers, installed under this agreement shall be guaranteed to live and grow, and shall be warranted against defects, death and unsatisfactory growth for a period of one (1) year from the day of final acceptance of contract work.
- B. Non-living landscape elements shall also carry a one (1) year guarantee on materials, labor, and workmanship.
- C. Material found to be dead or in poor condition within the Warranty Period shall be replaced by the Contractor within fifteen (15) days of written notification by the Owner's representative. The Owner or Landscape Architect shall be the sole judge as to the condition of the material.
- D. Materials and labor involved in the replacing of materials shall be supplied by the Contractor at no additional cost to the Owner.
- E. Soil Testing: Should plant materials show yellowing or other signs of soil and/or nutritional problems, the Owner or Landscape Architect may request soil testing and analysis. Such testing will be at the expense of the Contractor.
 - 1. Soil problems (as revealed by testing) shall be corrected by application of corrective chemicals and nutrients, removal and replacement of soil, or other measures as agreed upon by all parties. All such measures shall be at the Contractor's expense unless clear evidence establishes that the soil problem is not pre-existing and is caused by factors beyond the Contractor's control.
- F. Replacement